I. EXECUTIVE SUMMARY/ FORMAL PROPOSAL (PHASE 1)

a. **Project Title and Applicant Name** -- Richter Brothers Anadromous Fish Screen Project, Richter Brothers

b. **Project Description and Primary Biological/Ecological Objectives**

Project Description: The existing pumped diversion facilities include three inclined pumps that divert water from the Sacramento River for irrigation east of the river. The existing facility includes three equal-sized pump/motor units having a total combined capacity of approximately 25 cfs. Two of the units are owned and operated by Richter Brothers (Richter), the third unit is owned and operated by Emile and Simone Furlan (Furlan). The two units belonging to Richter are required to have fish screens by directive from the State Water Resources Control Board.

This requirement is a condition associated with Richter's change in its point of diversion. Furlan is not required to screen its diversion at this time, however, Furlan is interested in contributing to the overall effort to restore anadromous fisheries in the Sacramento River system and would incorporate its diversion into a screened intake in common with Richter.

Primary Biological/Ecological Objectives: This project is to design and construct a positive-barrier fish screen to benefit multiple fish species in the Sacramento River by reducing entrainment and increasing production.

Direct mortality to fisheries resources due to entrainment into diversion pumps can occur as a result of unscreened diversions. Salmon fry and smolts are particularly susceptible to impacts from unscreened diversions. The significance of this stressor on fish populations varies depending on the size, location, type, duration, and timing of the diversion. Screening of diversions of all sizes is a documented near-term restoration action that can further reduce entrainment and contribute to increased production of salmon from the Sacramento River system. Design and construction of a positive-barrier fish screen at this diversion will provide immediate benefits to anadromous fish including winter-run, fall-run, late fall-run, and spring-run chinook salmon and steelhead. This project will also benefit multiple fish species in the Sacramento River including the resident Sacramento splittail, green, and white sturgeon. Installation of a positive-barrier fish screen at this location will contribute to the cumulative long-term ecological and biological health of the Sacramento River fishery by reducing mortality at critical life stages of both resident and migratory fish.

c. **Approach/Task/Schedule**

Approach: Richter Brothers approach to implementing its Fish Screen Project involves two phases, with the goal of completing construction in 1998. Phase 1 is to evaluate alternatives for screening its diversion and completing the environmental documentation. Phase 2 is to obtain the necessary permits and prepare plans and specifications for construction of the preferred alternative. Borcalli & Associates, Inc., was selected to assist Richter to manage the project, specifications, handle all permits and environmental documentation, prepare the construction plans, and subcontract for construction and installation of equipment.

Task: Specific tasks to be performed under Phase 1 include:

- Perform Project Management for Engineering and Construction
- Coordinate with the Anadromous Fish Screen Program Technical Team and Regulatory and Funding Agencies
- Identifying and Evaluate Alternatives to Screen and Select a Preferred Alternative
- Prepare Environmental Documentation for CEQA/NEPA Compliance
- Obtain Permits
- Perform Surveys for Preliminary Design

Schedule: The Phase 1 and Phase 2 work is scheduled to complete construction in the summer of 1998. The preconstruction work including the evaluation of alternatives, selecting the preferred alternative, and performing environmental documentation to comply with CEQA and NEPA will be completed in the fall and winter of 1997.

d. **Justification for Project and Funding by CALFED** -- Direct mortality to fisheries resources due to entrainment into diversion pumps can occur as a result of unscreened diversions. Salmon fry and smolts are particularly susceptible to impacts from unscreened diversions. The significance of this stressor on fish populations varies depending upon the size, location, type, duration, and timing of the diversion. However, screening of diversions of all sizes is a documented near-term restoration action that can further reduce entrainment and contribute to increased production of salmon from the Sacramento River system. Design and construction of a positive-barrier fish screen at this diversion will provide immediate benefits to anadromous fish including winter-run, fall-run, late fall-run, and spring run chinook salmon, and steelhead as well as Sacramento splittail and sturgeon. The proposed project has been stipulated by the State Water Resources Control Board and is consistent with the projects identified for implementing the CVPIA Action Program and in CALFED Bay-Delta Programs Stressors and Example Restoration Actions.

e. **Budget Costs and Third Party Impacts** -- The total Phase 1 cost is $49,165. The Phase 2 budget is anticipated to be in the range of $150,000 to $300,000, depending upon the alternative selected. No third-party impacts are anticipated from implementation of the project.

f. **Applicant Qualifications** -- The combined experience and expertise of Richter Brothers in handling and operating equipment together with the professional services provided by Borcalli & Associates, Inc., provide a very well qualified team to manage and perform the work required to complete the proposed project in a timely, cost-effective manner.

g. **Monitoring and Data Evaluation** -- B&A will work with the Anadromous Fish Screen Program (AFSP) Technical Team to formulate and implement a program to test and evaluate the performance of the proposed project.

h. **Local Support/Coordination with other Programs/Compatibility with CALFED objectives** -- The proposed project is identified for implementation in the CVPIA Action Program and is identified in the Stressors and Example Restoration Actions prepared by the Technical Teams that have been working with the CALFED Bay-Delta Program.

II. TITLE PAGE

a. **Title of Project** -- Richter Brothers Anadromous Fish Screen Project

b. **Name of Applicant** -- Richter Brothers, 22474 Karnak Road, Knights Landing, California 95645; Telephone: 916-735-6721 or 916-666-1629; Fax: 916-735-6959

c. **Type of Organization and Tax Status** -- Partnership

d. **Tax Identification Number** -- 94-2031828

e. **Technical and Financial Contact Persons**

Technical: Francis E. Borcalli, Borcalli & Associates, Inc., 4620 Northgate Boulevard, Suite 120, Sacramento, California 95834; Telephone: 916-564-3300; Fax: 916-564-7622; E-Mail: borcalli@aol.com

Financial: Henry D. Richter, Jr. and Lee W. Richter, Richter Brothers

f. **Participants/Collaborators in Implementation (Phase 1)**

Richter Brothers: Project Owner/Sponsor

Borcalli & Associates, Inc.: Consulting Engineers - Project Management and Alternatives Evaluation

EIP Associates: Subcontractor to B&A Providing Environmental Documentation and Permits

Anadromous Fish Screen Program Technical Team: Review of Design Criteria Alternatives and Participate in Selecting Preferred Alternative

g. **RFP Project Group Type** --

Phase 1 - Group 3: Services - Feasibility, Environmental Documentation and Surveys

Phase 2 - Group 1: Construction

a. **Project Description and Approach** -- The existing pumped diversion facilities are located on the left bank of the Sacramento River approximately one mile east of Knights Landing (Photo 1). The existing facility includes three equal-sized pump/motor units having a total combined capacity of approximately 25 cfs. Two of the units are owned and operated by Richter Brothers (Richter), the third unit is owned and operated by Emite and Simone Furlan (Furlan). The two units belonging to Richter are required to have fish screens.

This requirement was stipulated by the State Water Resources Control Board when Richter's changed its point of diversion. Furlan is not required to screen its diversion at this time' however, Furlan is interested in contributing to the overall effort to restore anadromous fisheries in the Sacramento River system and will incorporate his diversion into a screened intake in common with Richter.

Various alternatives will be considered for screening the existing diversion, including the following:

- Lakos-type self-cleaned with a water jet scouring system installed on a manifold to the three existing pumps.
- Cylindrical wedge wire screens cleaned by an air burst system installed on a manifold to the three existing pumps.
- U.S.Bureau of Reclamation flat plate wedge wire fish screen with air purge cleaning system.
- Flat plate wedge wire screens conforming to the river bank, installed on a new pumping plant structure and cleaned with an air scouring system.

Richter's approach to developing its proposed project was to select a firm that provided the overall project management for the project. The approach includes a two-phased effort. Phase 1 will provide for an evaluation of alternatives and the selection of a preferred alternative for implementation. Phase 2 would be implemented so that the design would be performed with construction completed in the summer of 1998.

b. **Location and/or Geographic Boundaries of Project** -- The proposed project is located on the left bank of the Sacramento River, approximately one mile east of Knights Landing (River Mile 88.6), as shown on Figure 1 and on Photograph 1. The project is located on land for which Richter has an easement for construction and operation of the facilities.

c. **Expected Benefit(s)** -- The unscreened diversion is the primary stressor being addressed under this proposal. Installation of a positive-barrier fish screen will provide immediate benefits to all runs of chinook salmon and steelhead. This is a straightforward and focused action that is a documented near-term restoration action that can further reduce entrainment of fish and contribute to increased production of salmon, steelhead, and other fish in the

Sacramento River system. Installation of fish screens for this project will contribute to the cumulative benefits of ecosystem restoration in combination with other stressor reduction programs and projects.

d. Background and Biological/Technical Justification -- Screening of diversions of all sizes is a documented near-term restoration action that can further reduce entrainment and contribute to increased production of salmon from the Sacramento River system. Design and construction of a positive-barrier fish screen at this diversion that will provide immediate benefits to anadromous fish includes: winter-run, fall-run, late fall-run, and spring-run chinook salmon and steelhead. The latter two species have the potential for being listed as endangered. This project will also benefit multiple fish species in the Sacramento River including the resident Sacramento splittail, green, and white sturgeon. The project is consistent with the Anadromous Fish Restoration Program Action Program and is consistent with actions identified by Technical Team working with the CALFED Bay-Delta Program to address stressors.

e. Proposed Scope of Work -- The principal tasks and activities to be performed under Phase 1 include overall project management to evaluate and select a preferred alternative for which the environmental documentation would be performed. Early completion of the environmental documentation under Phase 1 is critical for completion in 1998. Environmental, design, and construction activities to implement the fish screen project are described below. Activities that will be implemented in Phase 2 are shaded.

1.0 PROJECT MANAGEMENT

1.1 Prepare and Implement Project Management Plan -- B&A will prepare a Project Management Plan (PMP) and provide the basis for conducting, coordinating, and guiding the team in performing the work for design and construction. A Quality Assurance Plan (QAP) is an integral part of the PMP. The QAP will provide guidelines for the Quality Assurance Committee to review and check work performed by B&A and subconsultant staff to ensure quality in the design and construction.

1.2 Prepare Monthly Status Reports -- Brief written reports will be prepared each month to describe the status of the work and budget. The status of the work will be described in relation to the work completed and planned over the following two weeks.

1.3 Coordinate With Richter -- B&A will coordinate its day-to-day activities during the period of design and environmental review with Richter's program manager as well.

1.4 Coordinate With AFSP Technical Team -- The USFWS manages an AFSP Technical Team comprised of agencies having regulatory and resource management responsibility. B&A will meet with the Technical Team and or CDFG, as appropriate, as early as possible to advise them of the project and schedule and to keep them apprised of progress and receive input on the layout

and selection of a preferred alternative. The design and design criteria will also be reviewed to ensure acceptance of the developed project.

2.0 SURVEYING AND MAPPING

2.1 Perform Design Surveys -- The surveying and mapping will be developed for preliminary engineering and layouts of alternatives. This work will be used and augmented as required for purposes of design and construction.

2.2 Perform Construction Surveys -- One set of construction stakes will be provided, which would include a maximum of eight horizontal control points will be set to control the construction of the fish screen structure and fish ladder. A temporary benchmark will be provided.

3.0 ALTERNATIVES EVALUATION

3.1 Identify Screening Alternatives -- Borcalli & Associates, Inc. will develop a list of alternatives that warrant consideration for screening Richter's diversion. The list will be reviewed with members of the AFSP Technical Team for agreement.

3.2 Prepare Comparative Layouts and Costs -- The various alternatives identified in Activity 3.1 will be developed conceptually for purposes of evaluating costs but also constructability and reliability in service for fish protection and irrigation.

3.3 Review with Richter and AFSP Technical Team -- The information developed in Activity 3.2 will be compiled and evaluated and then reviewed with Richter and the AFSP Technical Team.

3.4 Select Preferred Alternative -- Based upon Borcalli & Associates, Inc.'s evaluation and reviews with Richter and the technical team, the preferred alternative will be selected. The preferred alternative will be refined for purposes of preparing the design report under Activity 6.1.

4.0 ENVIRONMENTAL DOCUMENTATION

4.1 Prepare CEQA Documentation -- EIP Associates will prepare a draft Initial Study. Key components of this task include the following.

a. Prepare the Project Description in accordance with configuration developed by the project team.

b. Prepare the Initial Study Checklist and Discussion Section to comply with current CEQA Standards.

c. Obtain a list of sensitive species from the USFWS Endangered Species Office and incorporate into the Initial Study, as appropriate.

d. Prepare discussion of fish impacts.

e. Develop a mitigation monitoring plan.

f. Write the Negative Declaration.

4.2 Distribute CEQA Documentation -- EIP will coordinate the distribution of the Initial Study/Negative Declaration in accordance with CEQA standards.

4.3 Agency Decision-making -- Prior to the approval of the project, EIP and the lead agency will consider comments received on the Negative Declaration. The Negative Declaration will then be adopted by the lead agency (California Department of Fish and Game) through their own internal processes.

4.4 Prepare NEPA Documentation -- Based upon recent conversations with USFWS, the USFWS will be the lead agency for NEPA documentation due to anticipated CVPIA funding. An Environmental Assessment (EA) is expected to be required for the project and anticipate that a Finding of No Significant Impact (FONSI) could be prepared.

Final acceptance of the environmental documentation and approval of the project will occur through USFWS's internal processes.

5.0 PERMITS

5.1 Obtain CDFG Streambed Alteration Permit -- Under Sections 1601-1606 of the CDFG Code, the CDFG has regulatory jurisdiction over the removal of materials and/or alteration of river bottoms.

5.2 Obtain State Reclamation Board Encroachment Permit -- Approval by the State Reclamation Board will be required for the Project.

5.3 Obtain California Regional Water Quality Control Board Section 401 Water Quality Certification -- A Section 401 Water Quality Certification will be obtained from the Central Valley Regional Water Quality Control Board.

5.4 Obtain U.S. Army Corps of Engineers: N33 and N4 Permits -- Compliance with Section 404 of the Clean Water Act is required. Issuance of Nationwide Permits 33 and 4 will satisfy Section 404 requirements.

5.5 Comply With Endangered Species Act -- Although there are no specific permit requirements associated with the Federal Endangered Species Act (ESA), the ESA is an important consideration in virtually all the environmental processes identified above. The ESA is an especially important consideration due to the potential listing of the spring-run chinook and Central Valley steelhead as an endangered species.

6.0 ENGINEERING DESIGN

6.1 Prepare Design Report -- B&A will prepare a Design Report that sets forth the overall concept of the project, conditions for operation, design, and the design criteria.

6.2 Perform Design and Prepare Construction/Procurement Plans and Specifications -- B&A and its subconsultants will perform engineering designs and prepare construction plans and specifications for the civil, mechanical, and electrical features of the project.

6.3 Perform Design Quality Assurance -- The Quality Assurance Plan will be prepared with a schedule and procedures for conducting Quality Assurance reviews of the design.

6.4 Prepare As-Built Drawings -- B&A will provide Richter with as-built drawings at the conclusion of the project.

7.0 CONSTRUCTION/EQUIPMENT INSTALLATION

7.1 Coordinate Irrigation Operation -- B&A will coordinate with Richter regarding the coordination of irrigation operation as it may affect construction and the tie into the existing pipelines.

7.2 Perform Design Liaison -- Liaison from design to construction will be provided through the project engineers for design and construction, as required.

7.3 Manage Construction -- Pacific Engineering Contractors (PEC) will manage the construction and installation of materials and equipment and coordinate such activities with B&A personnel.

7.4 Perform Construction Project Administration -- In carrying out this activity, B&A will:

a. Keep Richter informed of the work and work schedule.

b. Coordinate the work and minimize any impact to Richter's farm operations.

c. Receive, review, and document drawings and product/material specifications.

d. Make clarifications and interpretations of the plans and specifications when needed and transmit clarifications and interpretations to contractors.

e. Ensure that subcontractor complies with the terms and conditions for permits issued for construction of the project.

f. Maintain orderly files for correspondence, reports of job conferences, and shop drawings.

g. Furnish Richter periodic reports on the progress and subcontractor's compliance with the construction schedule and submittals.

h. Process Payment Requests -- Review progress payments request for consistency with work performed.

i. Compile Certificates and prepare Maintenance and Operations Manual.

j. Completion of the Work -- Issue a Certificate of Substantial Completion, upon completion of the project to the satisfaction of Richter and PEC.

7.5 Perform Construction Quality Assurance -- In carrying out the construction Quality Assurance, B&A will review work, reject defective work, inspect, and order tests as required.

8.0 OPERATIONS AND MAINTENANCE

8.1 Prepare O&M Document -- B&A will compile all manufacturers' instructions for operation and maintenance of equipment that has been incorporated into the project.

8.2 Provide Operations Training -- Upon completion of the construction, B&A will review the O&M documents with Richter and provide operation orientation.

9.0 PROJECT EVALUATION

9.1 Measure Approach Velocity -- Approach velocity is an important design parameter and a program will be developed and scheduled with the AFSP Technical Team to implement the work and evaluate the data.

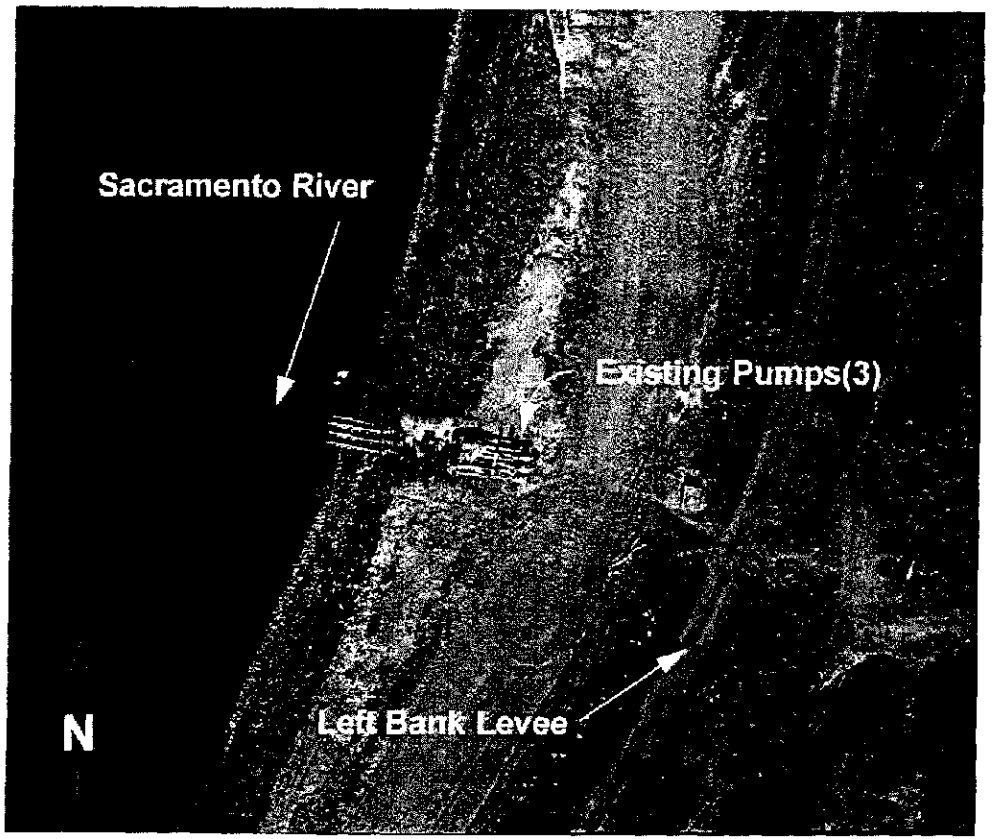
9.2 Test Screen Cleaning System -- As part of an overall evaluation program that will be developed in consultation with the Technical Team, the screen cleaning system will be tested and evaluated.

f. **Monitoring and Data Evaluation** -- As B&A has performed on similar projects, a program will be prepared in consultation with the AFSP Technical Team to confirm that the screen approach velocities are within criteria and that the constructed facility meets with the approval of the regulatory agencies.

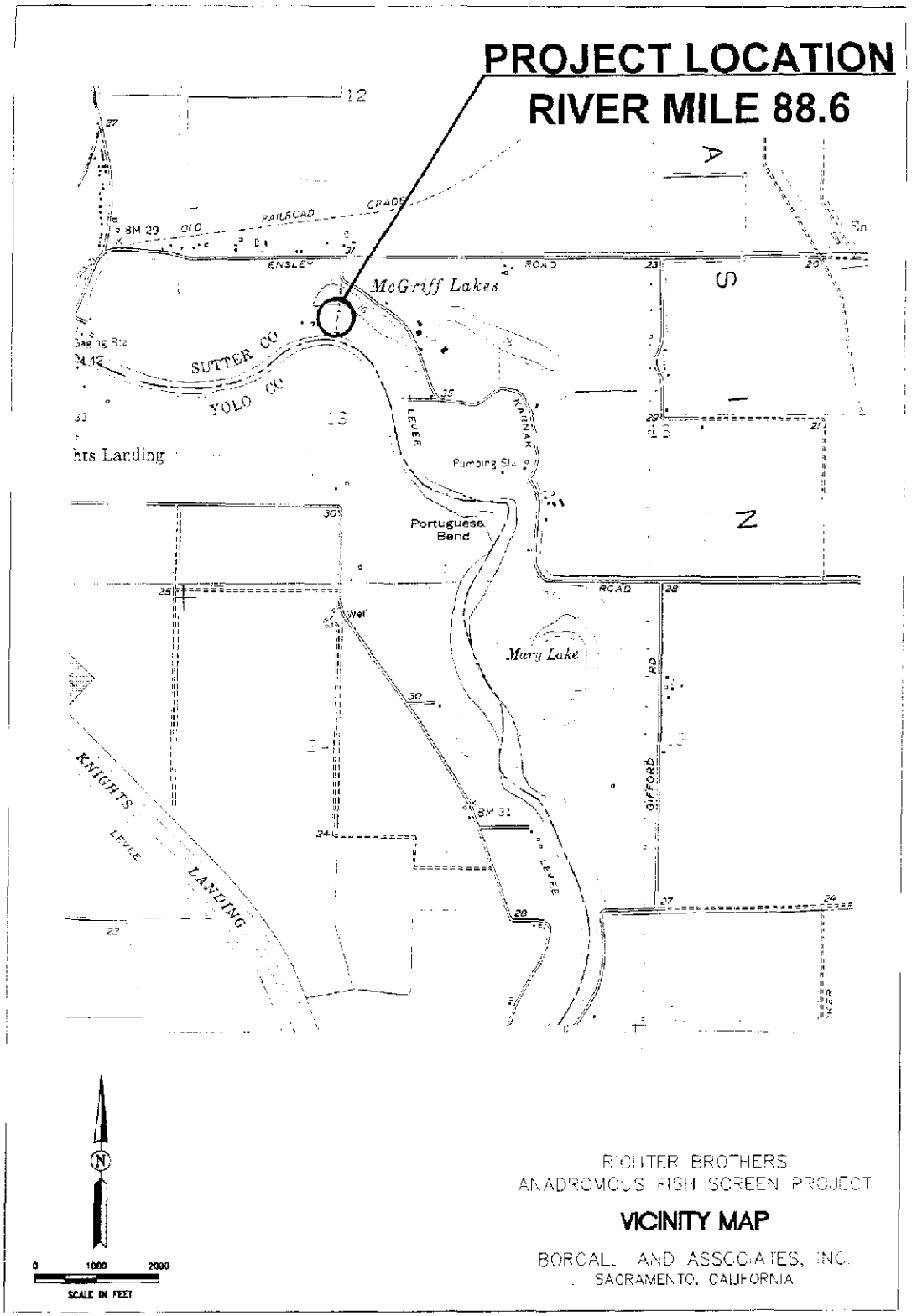
g. **Implementability** -- The environmental assessment of the project will be conducted in compliance with CEQA and NEPA; and the design will be performed with adherence to established design criteria and parameters. Richter is required to implement a project to screen its diversion and the adjacent diverter is willing to join in.

RICHTER BROTHERS
ANADROMOUS FISH SCREEN PROJECT

EXISTING FACILITIES



Photograph 1



RICHTER BROTHERS
ANADROMOUS FISH SCREEN PROJECT

VICINITY MAP

BORCALL AND ASSOCIATES, INC.
SACRAMENTO, CALIFORNIA

I —0 0 4 9 4 1

I-004941

a. **Budget Costs** -- A budget was prepared for the Phase 1 design which included an evaluation of alternatives and the preparation of the environmental documentation for the preferred alternative. The estimated level of effort and budget are presented on Tables 1 and 2, according to the respective tasks and activities for performing the work. As shown on Table 2, the total cost for Phase 1 is $49,165.

CALFED funding is critical to implementing this important project. The funding commitments and pursuits are identified below. Richter and Furlan combined, have made a significant financial contribution already, having paid nearly $30,000 into the U.S. Bureau of Reclamation environmental restoration fund. In 1997, the amount paid was $13,761, and has been increasing each year.

Source of Funding	Amount, $	Status
CVPIA	24,582	Requested[1/]
CALFED	24,583	Requested with this proposal
TOTAL	49,165	

[1/] Assumed 50 percent contribution from CVPIA.

b. **Schedule Milestones** -- Presented on Figure 2 is the schedule for performing the Phase 1 work with the objective of completing Phase 2, the design and construction by fall 1998.

The budget for specific tasks and activities are presented in Table 2. The dispersement of funds will generally track the time periods reflected on Figure 2.

Practically speaking, the majority of the funds for Tasks 1 through 4 totaling $49,165 will be expended in the fall and winter of 1997. The funds for Phase 2 will be expended in the spring and summer of 1998.

c. **Third Party Impacts** -- There will be no third-party impacts resulting from implementing the project.

RICHTER BROTHERS
ANADROMOUS FISH SCREEN PROJECT

TABLE 1
PHASE 1 - PERSONNEL EFFORT (hours)

Task/Activity	FB	DM	DW	RD	ED	CAD	WP	Clr.	Sub	Total
1. PROJECT MANAGEMENT										
1.1 Prep. & Implement Project Mgmnt Plan	8						4			12
1.2 Prepare Monthly Status Reports	4						3			7
1.3 Coordinate with Richter	6						1			7
1.4 Coordinate with AFSP Technical Team	6						4			10
Subtotal	24	0	0	0	0	0	12	0		36
2. SURVEYING AND MAPPING										
2.1 Perform Design Surveys		8								8
2.2 Perform Construction Surveys										0
Subtotal	0	8	0	0	0	0	0	0		8
3. ALTERNATIVES EVALUATION										
3.1 Identify Screening Alternatives	12	12			8		2			34
3.2 Prepare Comparative Layouts and Costs	20	50			8	60	6	6		150
3.3 Review with Richter AFSP Technical Team	12	8				4	4	4		32
3.4 Select Preferred Alternative	4	4			4	8	2			22
Subtotal	48	74	0	0	20	72	14	10		238
4. ENVIRONMENTAL DOCUMENTATION										
4.1 Prepare CEQA Documentation	1	8	8	80		8		4		109
4.2 Distribute CEQA Documentation			16							16
4.3 Agency Decision Making			16							16
4.4 Prepare NEPA Documentation			8	48						56
Subtotal	1	8	48	128	0	8	0	4		197
5. PERMITS										
5.1 Obtain Streambed Alteration Permit										0
5.2 Obtain State Reclamation Board Permit										0
5.3 Obtain RWQCB Section 401 Water Quality Cert.										0
5.4 Obtain Corps of Engineers N33 and N4 Permits										0
5.5 Comply with Endangered Species Act			8	16						24
Subtotal	0	0	8	16	0	0	0	0		24
6. ENGINEERING DESIGN										
6.1 Prepare Design Report	12	24								36
6.2 Prep. Constr./Procurement Plans & Specs.										0
6.3 Perform Design Quality Assurance										0
6.4 Bid and Execute Contracts										0
6.5 Prepare As-Built Drawings										0
Subtotal	12	24	0	0	0	0	0	0		36
7. CONSTRUCTION/EQUIPMENT INSTALLATION										
7.1 Coordinate Irrigation Operation										0
7.2 Perform Design Liaison										0
7.3 Manage Construction										0
7.4 Perform Construction Contract Administration										0
7.5 Perform Construction Quality Assurance										0
Subtotal	0	0	0	0	0	0	0	0		0
8. OPERATION AND MAINTENANCE										
8.1 Prepare O&M Document										0
8.2 Provide Operations Training										0
Subtotal	0	0	0	0	0	0	0	0		0
9. PROJECT EVALUATION										
9.1 Measure Approach Velocity										0
9.2 Test Screen Cleaning System										0
Subtotal	0	0	0	0	0	0	0	0		0
TOTAL	85	114	56	144	20	80	26	14		539

RICHTER BROTHERS
ANADROMOUS FISH SCREEN PROJECT

TABLE 2
PHASE 1 - PERSONNEL COST (dollars)

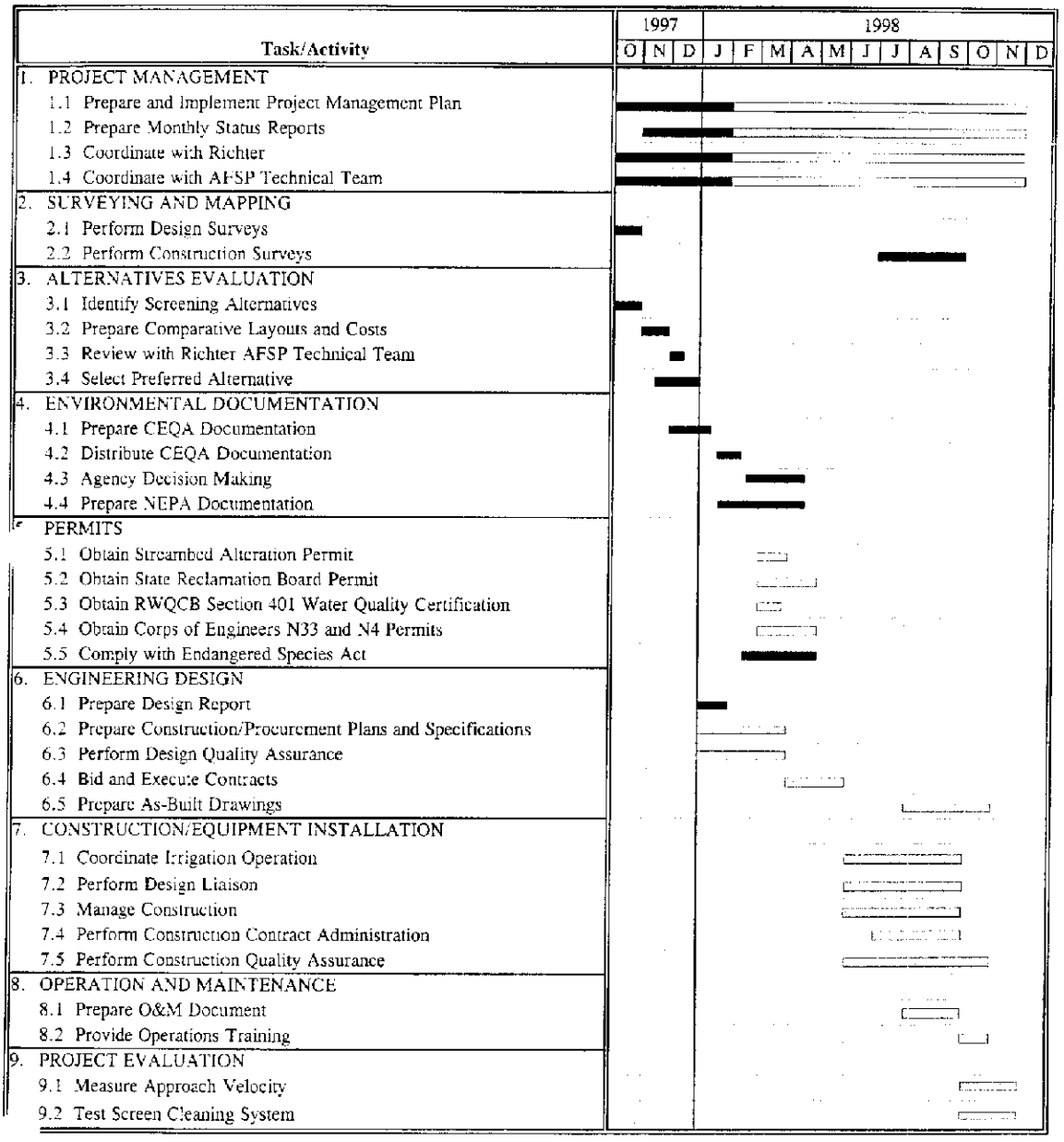
Task/Activity	FB 115 [1]	DM 80	DW 85	RD 75	ED 96	CAD 65	WP 45	Clr 30	Sub	Total
1. PROJECT MANAGEMENT										
1.1 Prep. & Implement Project Mgmnt. Plan	920	0	0	0	0	0	180	0	0	1,100
1.2 Prepare Monthly Status Reports	460	0	0	0	0	0	135	0	0	595
1.3 Coordinate with Richter	690	0	0	0	0	0	45	0	0	735
1.4 Coordinate with AFSP Technical Team	690	0	0	0	0	0	180	0	0	870
Subtotal	2,760	0	0	0	0	0	540	0	0	3,300
2. SURVEYING AND MAPPING										
2.1 Perform Design Surveys	0	640	0	0	0	0	0	0	6,000	6,640
2.2 Perform Construction Surveys	0	0	0	0	0	0	0	0	0	0
Subtotal	0	640	0	0	0	0	0	0	6,000	6,640
3. ALTERNATIVES EVALUATION										
3.1 Identify Screening Alternatives	1,380	960	0	0	768	0	90	0	0	3,198
3.2 Prepare Comparative Layouts and Costs	2,300	4,000	0	0	768	3,900	270	180	0	11,418
3.3 Review with Richter AFSP Tech. Team	1,380	640	0	0	0	260	180	120	0	2,580
3.4 Select Preferred Alternative	460	320	0	0	384	520	90	0	0	1,774
Subtotal	5,520	5,920	0	0	1,920	4,680	630	300	0	18,970
4. ENVIRONMENTAL DOCUMENTATION										
4.1 Prepare CEQA Documentation	115	640	680	6,000	0	520	0	120	0	8,075
4.2 Distribute CEQA Documentation	0	0	1,360	0	0	0	0	0	0	1,360
4.3 Agency Decision Making	0	0	1,360	0	0	0	0	0	0	1,360
4.4 Prepare NEPA Documentation	0	0	680	3,600	0	0	0	0	0	4,280
Subtotal	115	640	4,080	9,600	0	520	0	120	0	15,075
5. PERMITS										
5.1 Obtain Streambed Alteration Permit	0	0	0	0	0	0	0	0	0	0
5.2 Obtain State Reclamation Board Permit	0	0	0	0	0	0	0	0	0	0
5.3 Obtain RWQCB Sec. 401 Water Quality Cert.	0	0	0	0	0	0	0	0	0	0
5.4 Obtain Corps of Eng. N33 and N4 Permits	0	0	0	0	0	0	0	0	0	0
5.5 Comply with Endangered Species Act	0	0	680	1,200	0	0	0	0	0	1,880
Subtotal	0	0	680	1,200	0	0	0	0	0	1,880
6. ENGINEERING DESIGN										
6.1 Prepare Design Report	1,380	1,920	0	0	0	0	0	0	0	3,300
6.2 Prep. Constr./Procurement Plans & Specs.	0	0	0	0	0	0	0	0	0	0
6.3 Perform Design Quality Assurance	0	0	0	0	0	0	0	0	0	0
6.4 Bid and Execute Contracts	0	0	0	0	0	0	0	0	0	0
6.5 Prepare As-Built Drawings	0	0	0	0	0	0	0	0	0	0
Subtotal	1,380	1,920	0	0	0	0	0	0	0	3,300
7. CONSTR./EQUIPMENT INSTALLATION										
7.1 Coordinate Irrigation Operation	0	0	0	0	0	0	0	0	0	0
7.2 Perform Design Liaison	0	0	0	0	0	0	0	0	0	0
7.3 Manage Construction	0	0	0	0	0	0	0	0	0	0
7.4 Perform Construction Contract Admin.	0	0	0	0	0	0	0	0	0	0
7.5 Perform Construction Quality Assurance	0	0	0	0	0	0	0	0	0	0
Subtotal	0	0	0	0	0	0	0	0	0	0
8. OPERATION AND MAINTENANCE										
8.1 Prepare O&M Document	0	0	0	0	0	0	0	0	0	0
8.2 Provide Operations Training	0	0	0	0	0	0	0	0	0	0
Subtotal	0	0	0	0	0	0	0	0	0	0
9. PROJECT EVALUATION										0
9.1 Measure Approach Velocity	0	0	0	0	0	0	0	0	0	0
9.2 Test Screen Clearing System	0	0	0	0	0	0	0	0	0	0
Subtotal	0	0	0	0	0	0	0	0	0	0
TOTAL	9,775	9,120	4,760	10,800	1,920	5,200	1,170	420	6,000	49,165

[1] Hourly rates including salary, benefits, overhead and profit.

FIGURE 2

RICHTER BROTHERS
ANADROMOUS FISH SCREEN PROJECT

PROJECT DEVELOPMENT SCHEDULE



The applicant, Richter Brothers, is experienced in operating and maintaining facilities from hands-on construction of buildings, water conveyance facilities, earthwork, pumps and motors which are part of its agricultural enterprise. Needing professional assistance to manage the development of its fish screen project, Richter interviewed six engineering firms. Richter selected Borcalli & Associates, Inc. to serve as overall project manager for implementing the project.

B&A has extensive experience managing multiple disciplines and performing the work required to complete environmental and permitting activities as well as the design and construction of fish screens on both gravity and pumped diversions.

Presented on Figure 3 is the functional organization for carrying out this work.

Brief biosketches of key personnel identified in the Functional Organization Chart (Figure 3) are presented below.

Program Manager

Francis E. Borcalli, P.E. -- Licensed Civil Engineer, Agricultural Engineer, and Engineering Contractor with 33 years of experience in the planning, design, and management of water resources projects. As Project Manager and major participant in numerous projects, Mr. Borcalli has been responsible for assembling and managing multi-disciplined teams, preparing design reports and construction drawings, preparing construction and procurement specifications, and providing construction management services.

Construction Plans and Specifications

Daniel J. Matthies, P.E. -- Licensed Civil Engineer with eight years of experience in planning and designing water resources projects. Mr. Matthies has served as Design Engineer on several water resource projects, including pumping plants, fish screens, fish ladders, hydraulic structures and levees.

Fisheries Engineering

Edward E. Donahue, P.E. -- Licensed Civil Engineer with 33 years of experience in civil and hydraulic engineering which focused on fisheries facilities, natural resource projects, complex water control requirements required at fish hatcheries and fish passage facilities.

Construction Quality Assurance

Robert O. Bowman, P.E. -- Licensed Civil Engineer with 15 years of experience in the planning and design of water resources projects and construction management/design liaison.

Environmental Documentation

David Wolff -- Biologist with 10 years experience. Biological resource management and environmental assessments for CEQA and NEPA compliance.

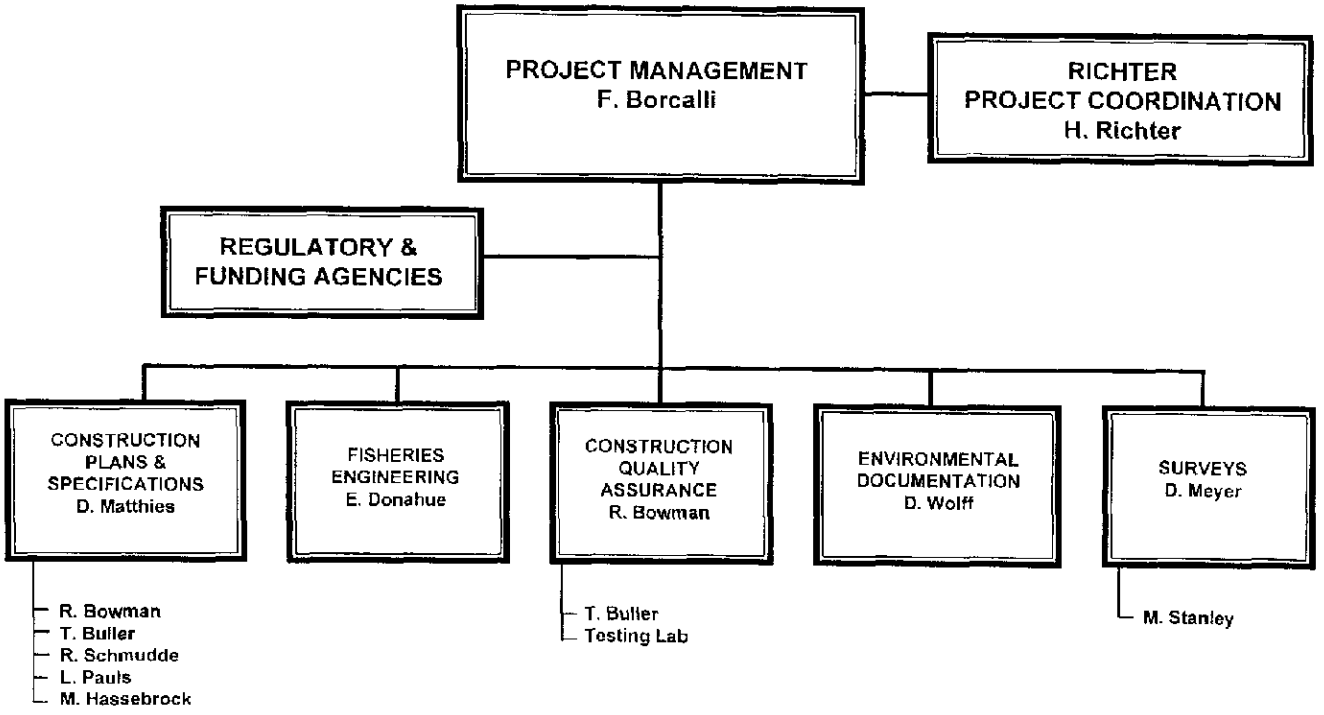
Surveys

Dennis Meyers -- PLS with over 20 years of surveying and mapping experience. Mr. Meyers will oversee the development of surveys for design and control of construction.

FIGURE 3

RICHTER BROTHERS
ANADROMOUS FISH SCREEN PROJECT

FUNCTIONAL ORGANIZATION



VI. COMPLIANCE WITH STANDARD TERMS AND CONDITIONS

The applicant has or will comply with the requirements of CALFED, thus, no deviations are being required. The services of Borcalli & Associates, Inc. have been secured consistent with provisions of Government Code 4525 et seg.

Specific documents submitted with this proposal for Phase 1 are as follows:

1. Nondiscrimination Compliance (Item 8)

2. Small Business Preference (Item 12)

FIRM NAME: Richter Brothers

The company named above (hereinafter referred to as "prospective contractor") hereby certifies, unless specifically exempted, compliance with Government Code Section 12990 (a-f) and California Code of Regulations, Title 2, Division 4, Chapter 5 in matters relating to reporting requirements and the development, implementation and maintenance of a Nondiscrimination Program. Prospective contractor agrees not to unlawfully discriminate, harass or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, disability (including HIV and AIDS), medical condition (cancer), age, marital status, denial of family and medical care l[illegible] and denial of pregnancy disability leave.

CERTIFICATION

I, official named below, hereby swear that I am duly authorized to legally bind the prospective contractor to the above described certification. I am fully aware that this certification, executed on the date and in the county below, is made under penalty of perjury under the laws of the State of California.

OFFICIAL'S NAME: Henry D. Richter Jr.

EXECUTED: 7-24-97

EXECUTED IN THE COUNTY OF: Sutter

PROSPECTIVE CONTRACTOR'S SIGNATURE: Henry D. Richter Jr.

PROSPECTIVE CONTRACTOR'S TITLE: Partner

PROSPECTIVE CONTRACTOR'S LEGAL BUSINESS NAME: Richter Brothers

(General Acknowledgment)

STATE OF CALIFORNIA
COUNTY OF Sutter } ss.

On July 24, 1997 before me, the undersigned, a Notary Public in and for said State

personally appeared Henry D. Richter, Jr.

personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

LAVERNE M. DRIVER
Commission # 1144837
Notary Public - California
Sutter County
My Comm. Expires Jul 1, 2001

WITNESS my hand and official seal.

Signature Laverne M. Driver

Capacity of Signatory: Notary Public

I —004951

I-004951

Agreement No. _____

Exhibit _____

STANDARD CLAUSES –
SMALL BUSINESS PREFERENCE AND CONTRACTOR IDENTIFICATION NUMBER

NOTICE TO ALL BIDDERS:

Section 14835, et. seq. of the California Government Code requires that a five percent preference be given to bidders who qualify as a small business. The rules and regulations of this law, including the definition of a small business for the delivery of service, are contained in Title 2, California Code of Regulations, Section 1896, et. seq. A copy of the regulations is available upon request. Questions regarding the preference approval process should be directed to the Office of Small and Minority Business at (916) 322-5060. To claim the small business preference, you must submit a copy of your certification approval letter with your bid.

Are you claiming preference as a small business?

____ Yes* ___X___ No

*Attach a copy of your certification approval letter.

I-004952